

NEEDLE THORACOSTOMY

INDICATIONS

Rapidly deteriorating patient with severe respiratory distress who has signs and symptoms of life-threatening tension pneumothorax, such as:

- Progressively worsening dyspnea.
- Hypotension.
- Shock.
- Decreased or diminished breath sounds on the affected side.
- Distended neck veins.
- Tracheal deviation away from the affected side.

PROCEDURE:

- BH order required.
- Explain procedure to patient, place patient in upright position if tolerated.
- Assemble equipment:
 - 14 or 16 gauge 2 to 2½ inch needle and cannula with syringe attached. Use 20g, 1 inch needle and cannula for patients < 40 kg.
 - antiseptic wipes.
 - sterile 4 x 4's.
 - tape.
- Prepare area with antiseptic wipes at second intercostal space, midclavicular line.
- Insert needle perpendicular to the chest wall, at the level of the superior border of the third rib until needle is in contact with the rib. Maintain negative pressure on the syringe while inserting the needle.
- Maintain the needle in position, slowly 'walk' the needle with cannula over the **superior border** of the rib and advance until the pleural space is entered evidenced by one or more of the following:
 - a "popping" sound or "giving way" sensation
 - a sudden rush of air
 - ability to aspirate free air into the syringe
- Remove needle; leave cannula in place.
CAUTION: Do not reinsert needle into cannula due to danger of shearing cannula.
- Evaluate the effectiveness of the procedure by:
 - immediate, obvious improvement in respiratory status, signs and symptoms, vital signs, and lung sounds.
- Secure the cannula with dressing and tape allowing cannula to remain in patent.
- If there is no improvement, this procedure may be repeated.